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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,825	05/15/2001	Amita Chandra	WEICKM10	9533

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EXAMINER

OLSEN, KAJ K

ART UNIT PAPER NUMBER

1753

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

# Office Action Summary

Application No.

09/831,825

Applicant(s)

CHANDRA ET AL.

Examiner

Kaj Olsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. In claim 1, it is unclear what would reasonably be construed as being “essentially immiscible”.
4. In claim 2, the limitation “non-segregating conditions” is vague and should be more clearly explained. First, what is supposed to not segregate? Applicant needs to be more specific about what is not segregating. Second, if applicant is referring to the non-segregation of the one of the components, then isn't the crystallization of the first phase of claim 1 a segregation?
5. In claim 3, it is unclear what would constitute an “essentially eutectic composition”.
6. Claim 10 is indefinite because the use of the term “obtainable” is vague and doesn't appear to even require the solid to be made by the process of claim 1 (only potentially obtainable by the process).
7. Claim 11 is indefinite because it is incomplete. In particular, it is drawn to an electrochemical cell but only specifically discloses a porous solid. Moreover, the use of plural “electrolytes” is confusing. Is there more than one electrolyte?
8. Claims 14-16 provide for the use of the device of claims 10, 11, or 14, but, since the claim does not set forth any steps involved in the method/process, it is unclear what

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method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

9. Claims 14-16 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Leonard et al (USP 3,681,136).

12. Leonard discloses a method of producing a porous solid comprising preparing a fluid mixture including AgCl and KCl that has the claimed immiscibility properties, cooling the fluid mixture below the solidification point to form one crystalline phase (AgCl), and removing the second phase (col. 4, line 62 through col. 6, lines 28 and fig. 1).

13. With respect to the cooling step being non-segregating (see 112 rejection above), the steps taught in col. 4, line 73 through 5, line 7 would appear to read on applicant's quenching process, which is what the applicant appears to be claiming with the non-segregating language.

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14. With respect to the eutectic composition, see col. 3, lines 19-34.

15. With respect to solvent extraction, the use of leaching with hot water (col. 3, line 69 through col. 4, line 6) would read on a solvent extraction.

16. AgCl is water-insoluble, while KCl is water-soluble.

17. With respect to the particular mixture of claim 9, see col. 6, lines 29-35.

18. With respect to the structure claims, because Leonard appears to arrive at the same material as that of the instant invention (i.e. porous AgCl), then the substance formed by the method of Leonard is inherently a porous ion-conducting solid or electrolyte regardless of whether Leonard utilizes the solid as an electrolyte. The intended use of the device need not be given further due consideration.

19. With respect to filling the pores with fluid, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability.

20. With respect to the vaguely defined "use" of the product of the process of Leonard for either the determination of gases, in separation technology, or in catalysis, the use of electrochemical sensor electrodes for gas sensing electrodes is notoriously old in the art. find utility. In addition, biological electrodes (see Leonard, col. 1, lines 21-26) are often made catalytically sensitive to particular biological materials (e.g. via particular enzymes, antigens or antibodies bound thereto). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to "use" of the product of the process of Leonard for either gas sensing or catalytic electrodes because these are all conventional uses of electrochemical sensors.

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21. Claims 10-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shen et al (USP 5,650,054).

22. Shen discloses an electrochemical gas sensor with electrodes catalytic active to CO gas (col. 1, lines 29-55). The sensor comprises a porous electrolyte (see e.g. col. 8, lines 21-63).

Although the electrolyte is not disclosed as being made by the process of claim 1, the determination of patentability for the claim is based on the product itself. Because the product of the claim is identical to the invention of Shen the process from which it was made is the same as or obvious over the process utilized by Shen (see *In re Thorpe*, 777 F.2d 695, 698).

23. With respect to the filling with electrolyte, that is only the intended use of the apparatus and the intended use need not be given further due consideration in determining patentability. However, Shen also teaches that the electrolyte should be hydrated with water which is a known liquid electrolyte (see abstract).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 7:00 AM-4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be reached at (703) 308-3322.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications

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with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for regular communications is (703) 305-3599 and the fax number form after-final communications is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Kaj K. Olsen', with a stylized flourish extending from the end.

Kaj K. Olsen  
Patent Examiner  
AU 1753  
December 7, 2003